CLAIMS

What is claimed is:

1. A semiconductor package, comprising:

a substrate;

a die located and supported on said substrate with an adhesive layer between them;

a plurality of signal transferring means electrically connected said die to said substrate;

a sealant material attached on said substrate and said die to seal and protect said die and said plurality of signal transferring means;

a heat-spreading device attached atop said sealant material to conduct heat from said die to ambient air; and

a plurality of conductive means attached below said substrate to electrically connect a plurality of printed circuits on said substrate to external circuits.

2. The semiconductor packaging structure of claim1, wherein said plurality of conductive means includes a plurality of solder balls.

3.The semiconductor package of claim1, wherein said plurality of signal transferring means includes a plurality of bonding wires.

4. The semiconductor package of claim1, wherein said plurality of signal transferring means includes a plurality of conductive adhesive tapes.

5. The semiconductor package of claim1, wherein said heat-spreading device can be made of metal.

6. The semiconductor package of claim1, wherein said sealant material has a thermally conductive glue primed on it, wherein said thermally conductive glue conducts heat from said die through said sealant material to said heat-spreading device.

7. A semiconductor package, comprising:

a substrate;

a die located and supported on said substrate with an adhesive layer between them;

a plurality of signal transferring means which electrically connects said die to said substrate;

a sealant material which seals and protect said die and said plurality of signal transferring means, wherein said sealant material has geometrically a concave at the top surface of the center part ;

a heat-spreading device which is attached atop said sealant material to conduct heat from said die to ambient air, wherein said head spreading device has a downward bump aligned to said concave; and

a plurality of conductive means attached below said substrate to electrically connect a plurality of printed circuits on said substrate to external circuits.

8. The semiconductor package of claim7, wherein said plurality of conductive means includes a plurality of solder balls.

9.The semiconductor package of claim7, wherein said plurality of signal transferring means can be a plurality of bonding wires.

10. The semiconductor packaging structure of claim7, wherein said plurality of signal transferring means includes a plurality of conductive adhesive tapes.

11. The semiconductor package of claim7, wherein said heat-spreading device can be made of metal.

12. The semiconductor package of claim7, wherein said die has a thermally conductive glue, which conduct heat from said die through said sealant material to said heat-spreading device.

13. A method for packaging a semiconductor package, comprising:

attaching a die onto a substrate with an adhesive layer coated between them;

electrically connecting a plurality of bond pads on said die through a plurality of signal transferring means to said substrate;

sealing said signal transferring means and said die with a sealant material;

priming a thermally conductive glue on said sealant material;

attaching a heat-spreading device onto said sealant material and said thermally conductive glue; and

placing conductive balls onto lower side of said substrate to electrically connect said substrate to external circuits.

14. The method of claim 13, further comprising a step of:

singulating batches of packages on manufacturing process flow to form individual packages after placing said conductive balls.

15. The method of claim 13, wherein said adhesive layer includes silver paste.

16. The method of claim 13, wherein said sealant material includes a concave on top of it.

17. The method of claim 16, wherein said heat-spreading device has a down -ward bump aligned to said concave.

18.The method of claim 13, wherein said conductive balls include solder balls.